AMENDMENTS TO THE SPECIFICATION

ABSTRACT OF THE DISCLOSURE

~~An approach to solving combinational constraints, comprising compile and generate phases, is presented.~~

~~The compile phase constructs successive sets of constraints, each with a solution generator, according to blocks of a partition of the constraints' random variables. Interleaving conjunction of the constraints, with existential quantification of the constraints, is attempted.~~

~~The generate phase uses a reverse-order, block-by-block, process for solving constraints, where variables of each solution generator processed have been predetermined, by the processing of earlier blocks, except for the random variables of the current block.~~

~~The present invention can be used in conjunction with image computation.~~

~~Successive sets of reachable states of an FSM at successive time steps can be determined by successive applications of the compile phase, with each set of solution generators being saved.~~

~~The sets of solution generators permit a backward sequence of states, from an error state back to a start state, to be determined.~~

An approach to solving combinational constraints, comprising compile and generate phases, is presented. The compile phase constructs successive sets of constraints, each with a solution generator, according to blocks of a partition of the constraints' random variables. Interleaving conjunction of the constraints, with existential quantification of the constraints, is attempted. The generate phase uses a reverse-order, block-by-block, process for solving constraints, where variables of each solution generator processed have been predetermined, by the

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processing of earlier blocks, except for the random variables of the current block. The present invention can be used in conjunction with image computation. Successive sets of reachable states of an FSM at successive time steps can be determined by successive applications of the compile phase, with each set of solution generators being saved. The sets of solution generators permit a backward sequence of states, from an error state back to a start state, to be determined.

CROSS REFERENCE TO RELATED APPLICATIONS

This application is related to the following U.S. patent application, herein incorporated by reference, and referred to herein as the '0505 Application:

"Method and Apparatus For Solving Constraints," filed with Express Mail No. EU600-802-961US on the same date as the present application, with inventors Brian Eugene Lockyear, James Herbert Kukula and Robert F. Damiano, a docket number of 06816.0505, and having U.S. Patent Office Application No. 10/642,885 to be determined.

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